Claims

1. Magneto-inductive flow sensor for a fluid flowing in a pipeline, comprising: A measuring tube (1) for conveying the fluid; a magnetic circuit arrangement arranged at the measuring tube (1) for producing and guiding a magnetic field, which induces an electric field in the flowing fluid; and measuring electrodes for tapping a voltage from the electric field; wherein the measuring tube (1) includes a carrier tube (11) and a liner (12), especially a tubular liner, of insulating material accommodated in a lumen of the carrier tube (11); and wherein there is formed in a wall of the carrier tube (11) at least a first groove (115), which is open toward the lumen of the carrier tube (11).

2. Magneto-inductive flow sensor as claimed in claim 1, wherein the measuring tube (1) includes, additionally, an open-pored support skeleton (13) embedded in the liner (12) for stabilizing the liner, and wherein the at least one groove (115), especially a backcut groove (115), is at least partially so filled by a material, especially a sintered material, of the support skeleton (13), especially a support skeleton (13) directly sintered in the carrier tube (11), that the support skeleton (13) is connected by shape interlocking with the carrier tube (11).

3. Magneto-inductive flow sensor as claimed in claim 2, wherein the at least one groove (115) has a backcut, which is so filled by material of the support skeleton (13) that a radially effective shape interlocking is formed between the support skeleton (13) and the carrier tube (11).

4. Magneto-inductive flow sensor as claimed in claim 2 or 3, wherein there is formed on the support skeleton (13) a ridge (14) corresponding to the first groove (115), and wherein the ridge (14) is comprised, at least in part, of the material of the support skeleton (13) and extends into the first groove (115).

[5. Magneto-inductive flow sensor as claimed in one of the preceding claims, wherein the carrier tube (11) further has a second groove (116), especially one formed equally to the first groove (115) and spaced therefrom, formed in a wall of the carrier tube (11) and open towards the lumen of the carrier tube (11).

6. Magneto-inductive flow sensor as claimed in one of the preceding claims, wherein the at least one groove (115), especially one having a backcut, is at least partially so filled by insulating material of the liner (12), that the liner (12) is connected with the carrier tube (11) by shape-interlocking.

7. Magneto-inductive flow sensor as claimed in one of the preceding claims, wherein the at least one groove (115) includes a backcut, which is so filled by insulating material of the liner (12), that a shape-interlocking effective at least radially inwardly is formed between liner (12) and carrier tube (11).

8. Magneto-inductive flow sensor as claimed in one of the preceding claims, wherein the first groove (115) is embodied as an annular groove extending essentially coaxially with the wall of the carrier tube (11).

9. Magneto-inductive flow sensor as claimed in one of the preceding claims, wherein the first groove (115) has an essentially trapezoidally shaped cross section.

10. Method for manufacturing a measuring tube for a flow sensor as claimed in one of the preceding claims, which method comprises the steps of: Producing the support skeleton (13) in the lumen of the carrier tube (11) and introducing the liner (12) into the lumen of the carrier tube (11), wherein, for producing the support skeleton (13), loose sinter starting material is so charged into the lumen of the carrier tube (11), that it at least partially fills the at least one groove (115), and the charged sinter starting material is sintered within the carrier tube (11), and wherein, for introducing the liner into the lumen, insulating material is allowed to penetrate at least partially into the produced support skeleton (13) and is allowed to solidify in the lumen of the carrier tube (11), after the sinter starting material has been sintered within the carrier tube (11).